ABSTRACT OF THE DISCLOSURE

A substrate processing apparatus that removes an unwanted material on a surface of a peripheral portion of a substrate through etching by supplying etching liquid to the surface of the peripheral portion. The apparatus includes an etching liquid supplying mechanism that supplies the etching liquid to the peripheral portion of the substrate, and an annular member that has an inner periphery on or inside an outer periphery of the substrate and thereby defines a processing width to be processed by the etching liquid on the surface of the peripheral portion of the substrate. The annular member may be placed in close proximity to the surface of the peripheral portion of the substrate while securing a certain gap such that allows the annular member to come in contact with a liquid film of the etching liquid formed on the surface of the peripheral portion.